AMENDMENTS TO THE SPECIFICATION

Title: On page 1, amend the title as follows:

~~SYSTEM AND~~ METHOD TO REDUCE DISK ACCESS TIME DURING
PREDICTABLE LOADING SEQUENCES

Summary of the Invention: On pages 2-3, amend page 2, line 17 to page 3, line 2 as
follows:

Generally ~~speaking~~, the present invention is concerned with improving
data processing system performance by reducing the amount of time a system
consumes accessing its fixed disk storage. The invention is most applicable to
sequences or patterns of fixed disk access that occur repetitively and predictably.
The data processing system includes a fixed disk controller that is enabled to
monitor and record disk accesses (i.e., <u>to monitor and record</u> what tracks and
sectors are requested). When the disk controller detects a sequence that has
previously occurred one or more times, the disk controller is configured to copy
the various disk segments comprising the sequence into sequential space in a
dedicated portion of the disk. If the data in the sequence is accessed later, the disk
controller reroutes the requests into the relocated portion of the disk, where the
data is stored sequentially. <u>Since</u> ~~Because~~ the data is stored sequentially in the
dedicated portion, the disk spends less time moving the disk head among disk
portions that are randomly spaced on the disk. <u>Moreover, since</u> ~~In addition,~~
~~because~~ the relocated data is sequential, the disk controller can employ and
greatly benefit from pre-fetching data into a disk cache, either on the disk
controller or elsewhere.

<u>In particular, the invention discloses a method for loading data from a
disk. The method may comprise comparing a current sequence of disk requests to
data indicative of a previous disk request sequence. Responsive to detecting a</u>

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match between the current disk sequence and the previous disk sequence, a copy of data block accessed during the current disk sequence may be stored in a contiguous portion of the disk. Responsive to a subsequent request for data in the disk sequence, the request may be mapped to and serviced from the sequential portion of the disk. The contiguous portion of the disk to which the data is copied may be on a different partition of the disk than a disk partition on which the original data is stored. A sequence of disk accesses may be recorded. Responsive to retrieving data from the contiguous portion, additional data from the contiguous portion of the disk may be prefetched and may be cached in a buffer. Responsive to an I/O request, it may be determined whether the requested data resides in the buffer, and if so, the data from the buffer may be retrieved without accessing the hard disk.

In an exemplary one embodiment, the invention may be is applied to a system boot sequence, where the disk access sequence is likely to follow a pattern. In other exemplary embodiments, the invention may be is implemented in conjunction with post-boot disk sequences, such as the sequence that is followed when an application program is loaded.